nerewith (or previously mailed), a Notice of Allowance (PTOL-95) or other appropriate communication will be mailed in due course. NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. 1. ☑ This communication is responsive to 9/14/04. 2. ☑ The allowed claim(s) is/are 1-8. 3. ☑ The drawings filed on 17 October 2003 are accepted by the Examiner. 4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some* c) ☐ None of the: 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No. ☐ Some of the certified copies of the priority documents have been received in this national stage application from International Bureau (PCT Rule 17.2(a)). * Certified copies not received: ☐ Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirement of below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ☐ identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUI		Application No.	Applicant(s)
## Notice of Allowability Examiner	Notice of Allowability	10/605,679	CHEN, YI-NAN
The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith for previously mailed), a Notice of Allowance (PTO-165) or other appropriate communication will be mailed in due course. NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the of the Office or upon petition by the applicant. Sea 37 CFR 1.313 and MPEP 1308. 1. □ This communication is responsive to 9/14/04. 2. □ The allowed claim(s) is/are 1-8. 3. □ The drawings filed on 17 October 2003 are accepted by the Examiner. 4. □ □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). 3. □ Certified copies of the priority documents have been received. 2. □ Certified copies of the priority documents have been received in Application No. 3. □ Copies of the certified copies of the priority documents have been received in this national stage application from International Bureau (PCT Rule 17.2(a)). * Certified copies not received: Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requiremented below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 5. □ A SUBSTITUTE OATH OR DECLARATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. 6. □ CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) □ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) □ hereto or 2) □ to Paper No./Mail Date 1. □ dentifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as submitted. (b) □ including changes required by the Attached Examiner's Amendment / Comment or in the Office			
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of Biological Material 9. Other	Biological Material	9.	

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REASONS FOR ALLOWANCE

1. Claims 1-8 are allowed.

- 2. The following is an examiner's statement of reasons for allowance: None of the references of record teaches or suggests as cited in claim 1: ion bombarding an upper portion of said conformal silicon nitride protection layer; selectively etching away said ion bombarded upper portion of said conformal silicon nitride protection layer to expose an upper portion of said vertical sidewall of said deep trench, wherein remaining said conformal silicon nitride protection layer constitutes a silicon nitride hard mask protecting a lower portion of said deep trench; oxidizing said exposed upper portion of said vertical sidewall of said deep trench thereby forming a collar silicon oxide layer above said silicon nitride hard mask; selectively etching away said silicon nitride hard mask; using said collar silicon oxide layer as an etch mask to isotropic etching said vertical sidewall and said bottom surface of said deep trench that are not covered by said collar silicon oxide layer, thereby forming a bottle-shaped deep trench.
- 3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Economikos et al (6,403,412 B1): Method for In-Situ Formation of Bottle Shaped Trench by Gas Phase Etching.

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5. Any inquiry concerning this communication on earlier communications from the examiner should be directed to David Nhu, (571)272-1792. The examiner can normally be reached on Monday-Friday from 7:30 AM to 5:00 PM.

The examiner's supervisor, David Nelms can be reached on (571)272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (571)273-1792.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

David Nhu

AN

September 29, 2004

DAVID NHU PRIMARY EXAMINER